

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 2292 - L2 Version 4  
Chandra X-Ray Center

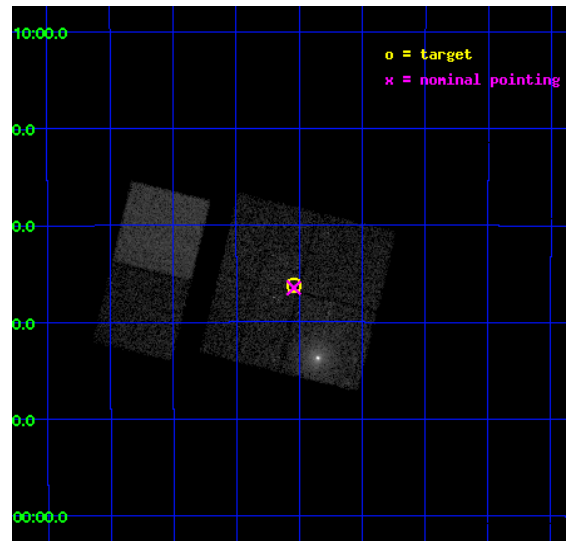
L2 Processing Date : Oct 18 2012

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# 1 Front

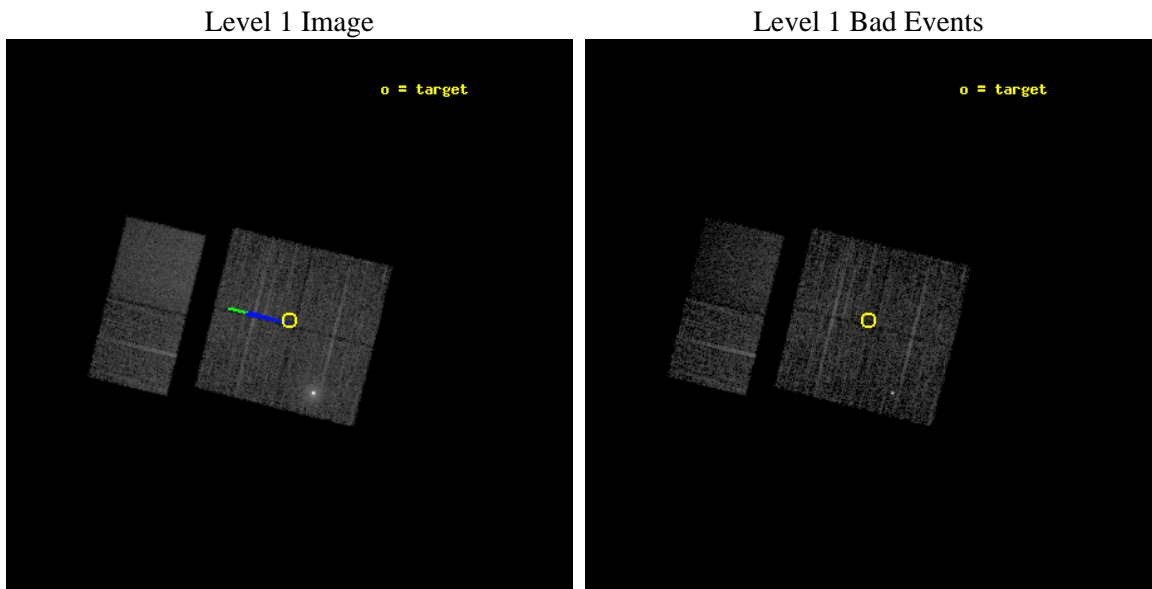
seq_num	900119	Sequence number
obs_id	2292	Observation id
title	CHANDRA SURVEY OF THE GALACTIC RIDGE AROUND THE MILKY WAY CENTER	P
observer	Prof. Q. Daniel Wang	Principal investigator
object	GCS 8	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.6364	Observer's specified target RA [deg]
dec_targ	-28.6031	Observer's specified target Dec [deg]
ra_nom	266.63554376256	Nominal RA [deg]
dec_nom	-28.607801436712	Nominal Dec [deg]
roll_nom	283.80728457199	Nominal Roll [deg]
revision	4	Processing version of data
ontime	11750.3590606	Sum of GTIs [s]
livetime	11601.568938958	Livetime [s]
ontime0	11753.600010931	Sum of GTIs [s]
ontime1	11750.3590606	Sum of GTIs [s]
ontime2	11750.3590606	Sum of GTIs [s]
ontime3	11750.3590606	Sum of GTIs [s]
ontime6	11750.3590606	Sum of GTIs [s]
ontime7	11753.600010931	Sum of GTIs [s]
l2events	77897	Number of level 2 events



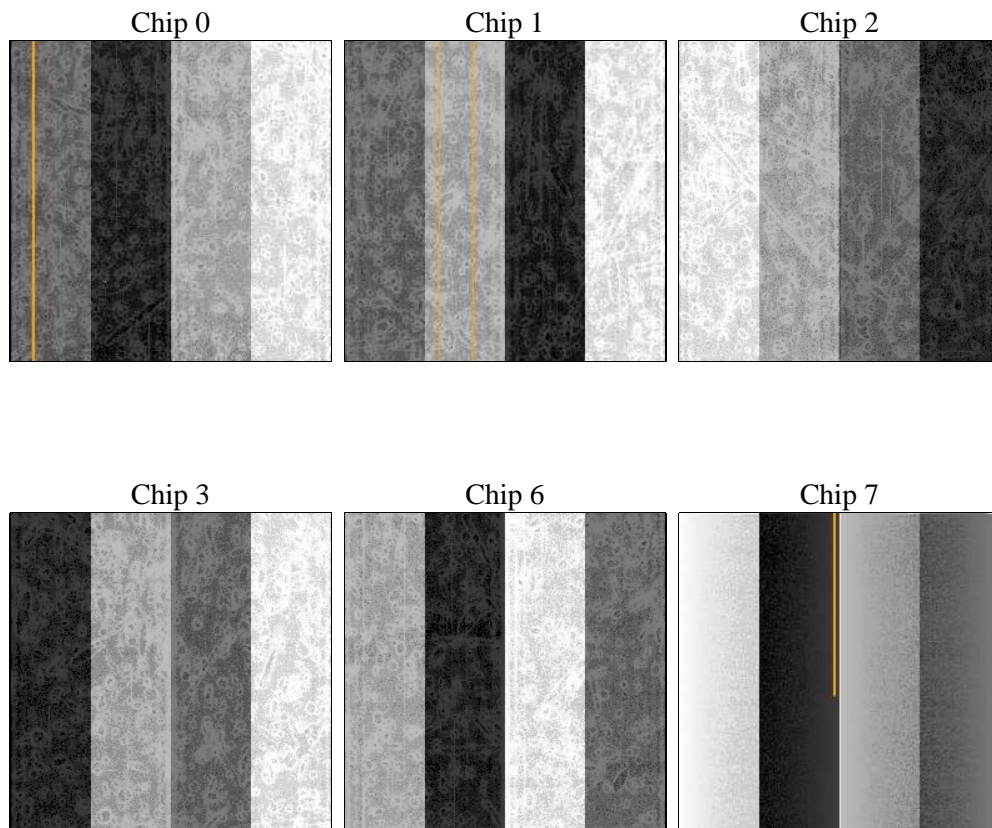
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	12000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	11750.3590606	Sum of GTIs [s]
caldsver	4.5.2	&#160	ontime0	11753.600010931	Sum of GTIs [s]
date	2012-10-18T20:12:17	Date and time of file creation	ontime1	11750.3590606	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	11750.3590606	Sum of GTIs [s]
			ontime3	11750.3590606	Sum of GTIs [s]
			ontime6	11750.3590606	Sum of GTIs [s]
			ontime7	11753.600010931	Sum of GTIs [s]
			l1events	229545	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	60343	30660	33118	32587	32367	40470	grade 0 events	20392	3523	3926	3762	2693	2081
rejected events	24913	23669	25809	25438	26627	18458		33%	11%	11%	11%	8%	5%
rejected %	41%	77%	77%	78%	82%	45%	grade 1 events	652	35	33	34	24	58
								1%	0%	0%	0%	0%	0%
							grade 2 events	6002	1301	1309	1323	1134	4450
								9%	4%	3%	4%	3%	10%
							grade 3 events	2297	553	564	563	482	2072
								3%	1%	1%	1%	1%	5%
							grade 4 events	2251	574	544	510	493	2035
								3%	1%	1%	1%	1%	5%
							grade 5 events	1756	1396	1106	1293	1416	4501
								2%	4%	3%	3%	4%	11%
							grade 6 events	4498	1043	971	991	941	11384
								7%	3%	2%	3%	2%	28%
							grade 7 events	22495	22235	24665	24111	25184	13889
								37%	72%	74%	73%	77%	34%

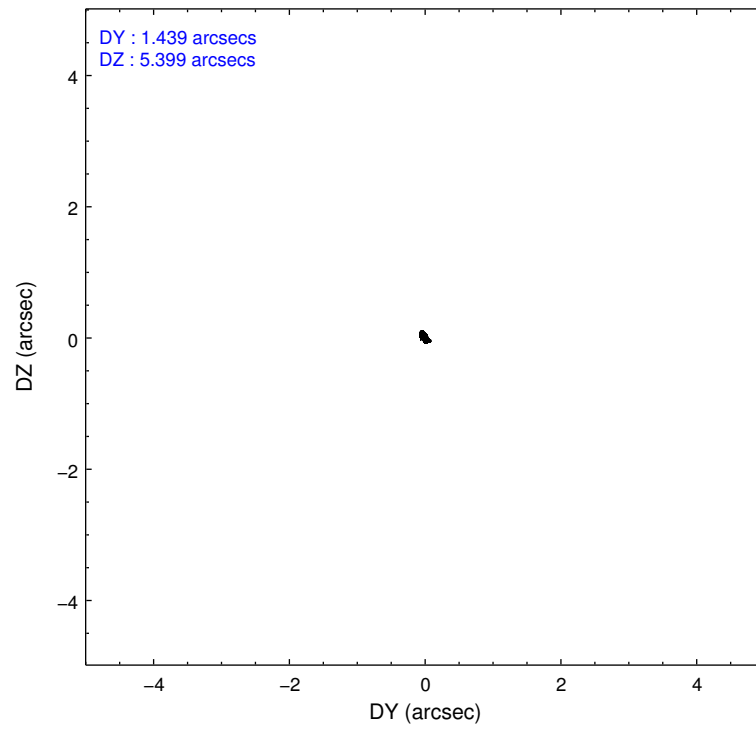
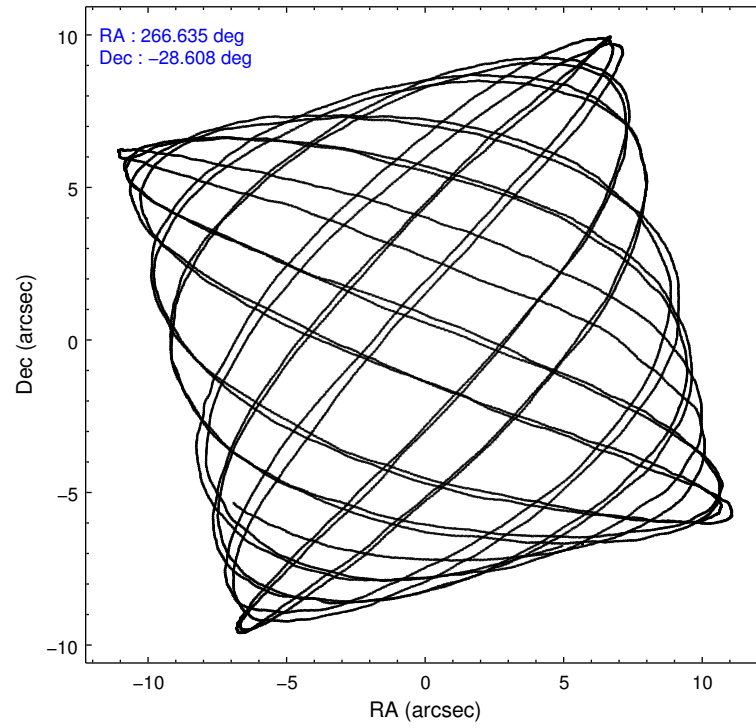


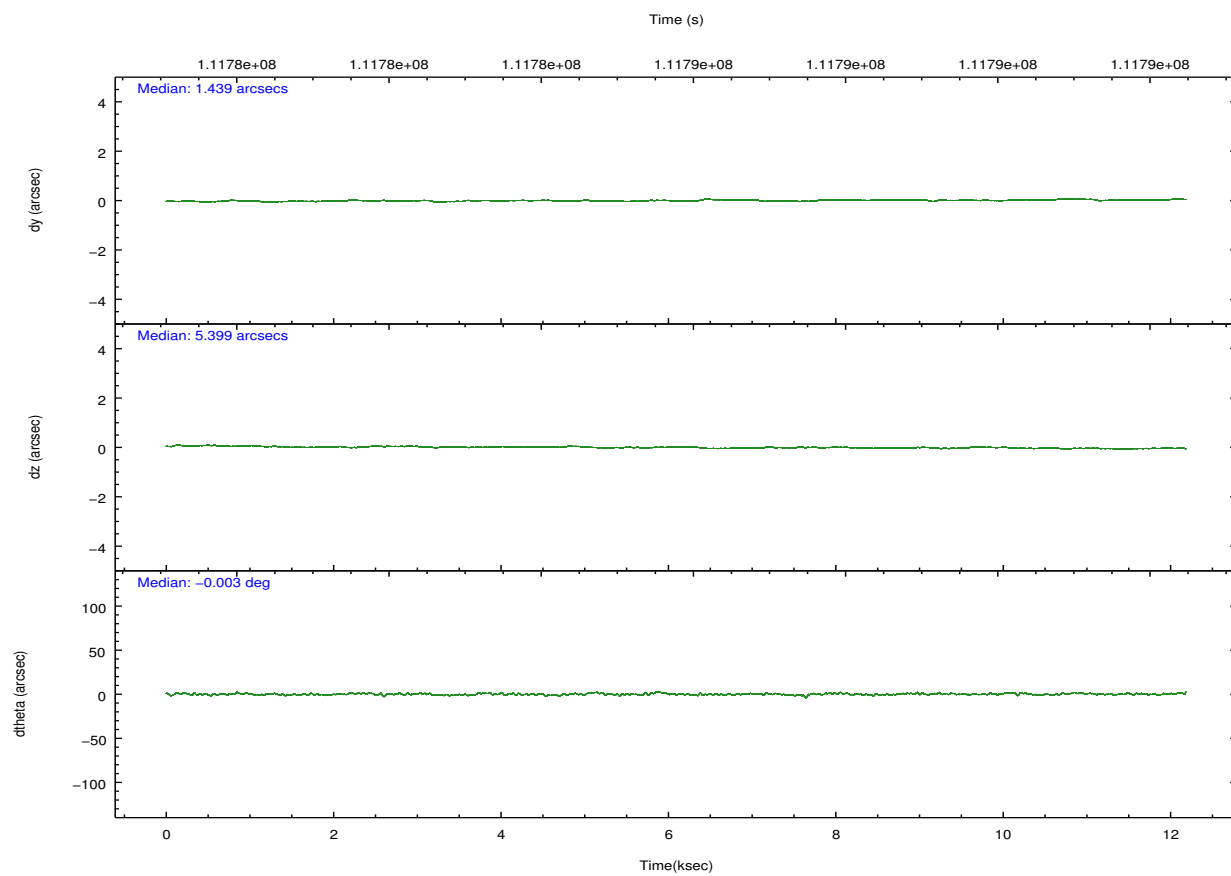
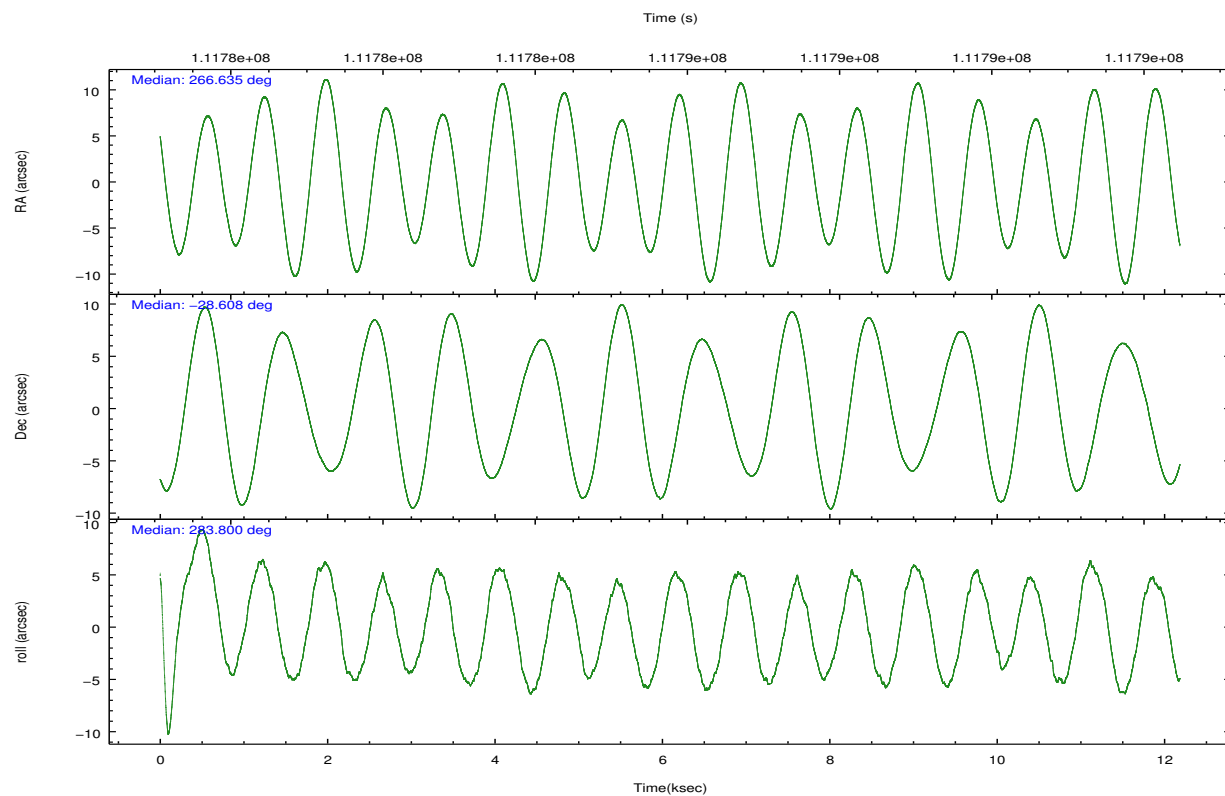
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-012367	ACIS-012367
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	266.613880	266.6355437625582
[deg] Pointing Dec	-28.587998	-28.60780143671177
[deg] Pointing Roll	283.588224	283.8072845719869
[deg] Roll angle	283.600000	283.600000
[deg] Roll tolerance	2.000000	2.000000
Roll constraint allows 180D rotation	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-233.592463	-233.5874344608287
[mm] SIM translation stage offset	0	-0.005018542100998502
[s] Observation start time (MET)	111779864.184000	111779488.83823
Observation start date	2001-07-17T17:56:40	2001-07-17T17:51:28
[s] Observation end time (MET)	111791864.184000	111791998.45122
Observation end date	2001-07-17T21:16:40	2001-07-17T21:19:58
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



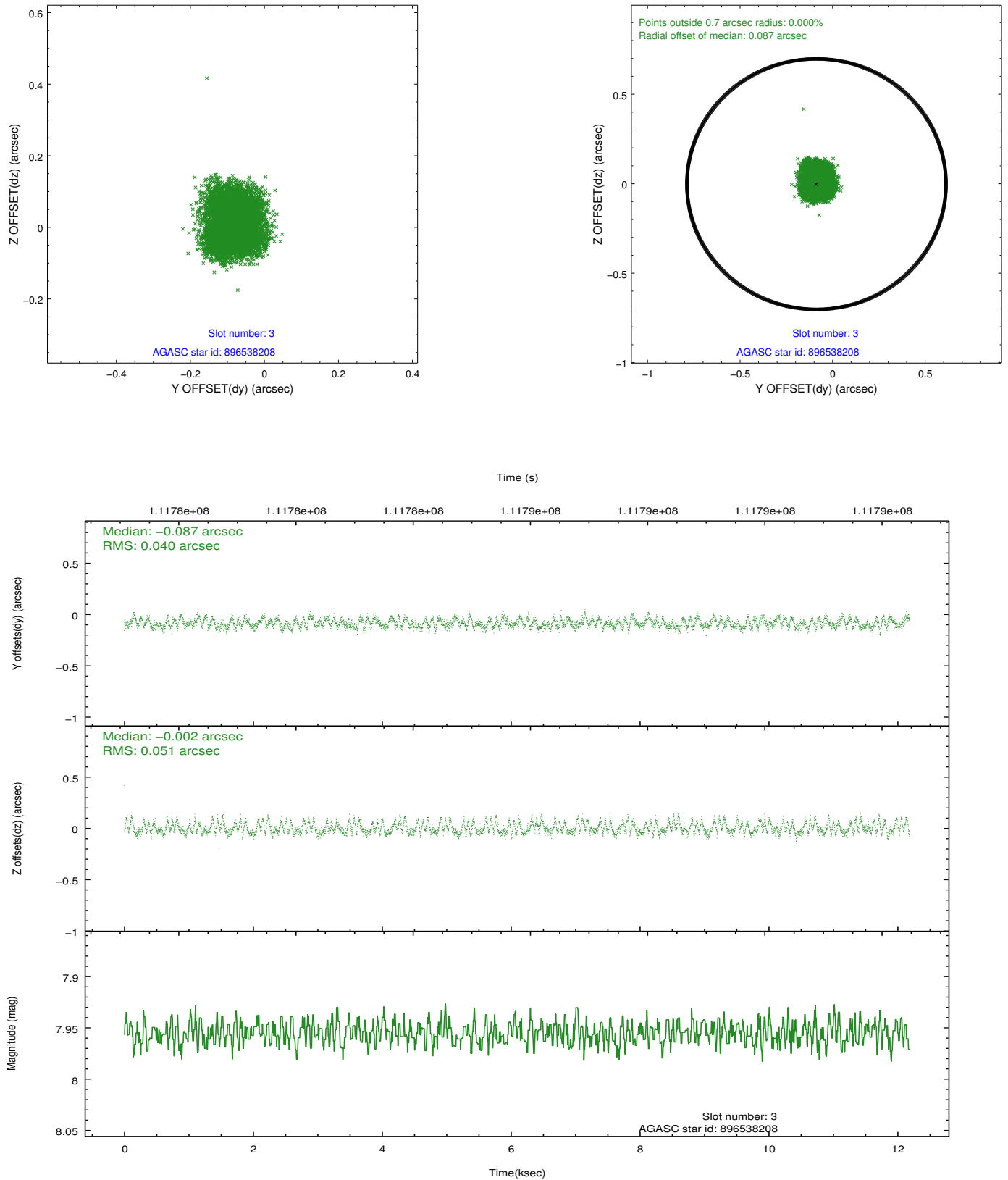


### Slot Statistics

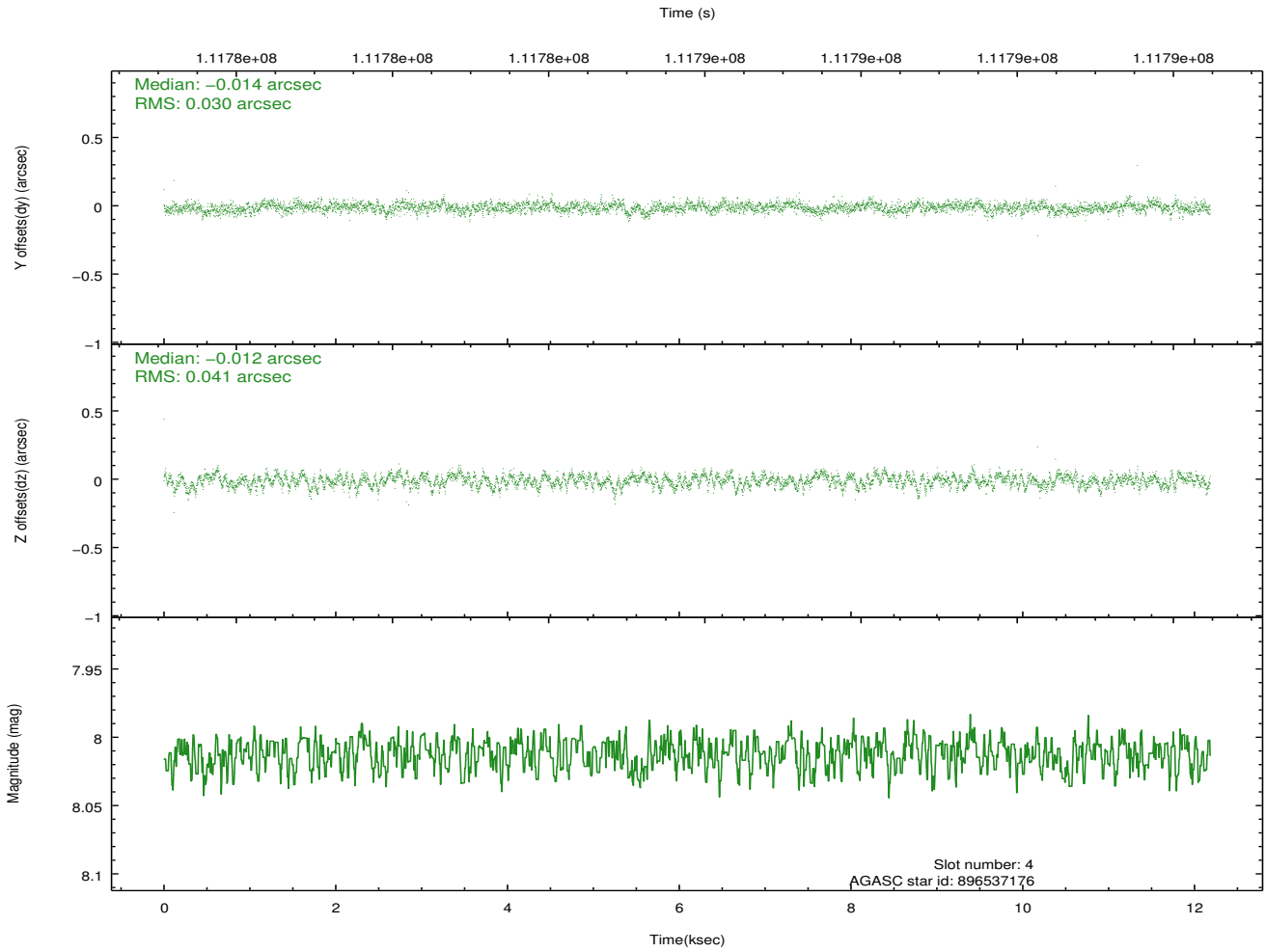
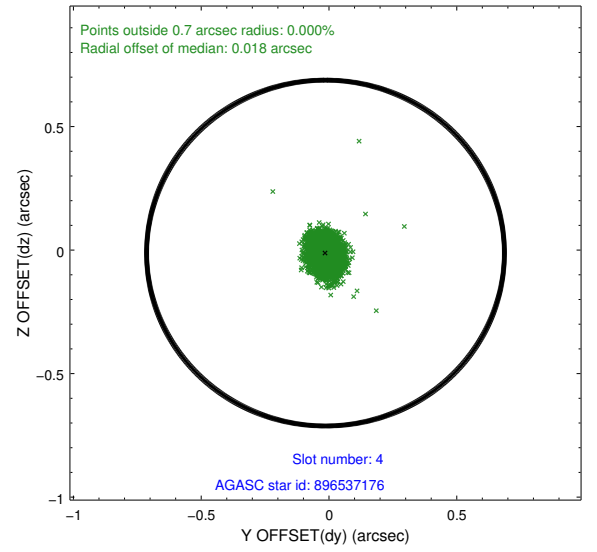
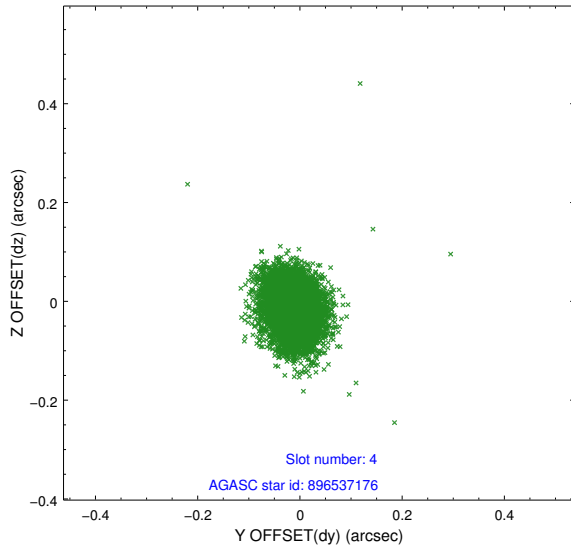
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.15	2972	-0.031	-0.046	0.010	0.019	0.000000	0.000000	-755.80	-835.17
1	FID	ACIS-I-4	7.18	2972	-0.029	0.039	0.007	0.013	0.000000	0.000000	2158.06	1070.91
2	FID	ACIS-I-5	7.23	2972	-0.040	0.076	0.010	0.018	0.000000	0.000000	-1809.12	1069.23
3	GUIDE	896538208	7.96	5945	-0.087	-0.002	0.070	0.109	267.176969	-28.671626	713.76	1657.82
4	GUIDE	896537176	8.01	5942	-0.014	-0.012	0.053	0.087	266.498272	-28.678259	229.86	-430.34
5	GUIDE	896536320	8.99	5939	0.085	-0.065	0.081	0.130	266.369048	-29.307026	2336.02	-1354.67
6	GUIDE	896011040	7.70	5944	0.002	-0.009	0.059	0.091	267.058469	-28.014759	-1671.80	1857.95
7	GUIDE	896538248	8.89	5937	0.014	0.083	0.063	0.102	266.238138	-28.240101	-1496.24	-863.64

## 2.4 Star Slots

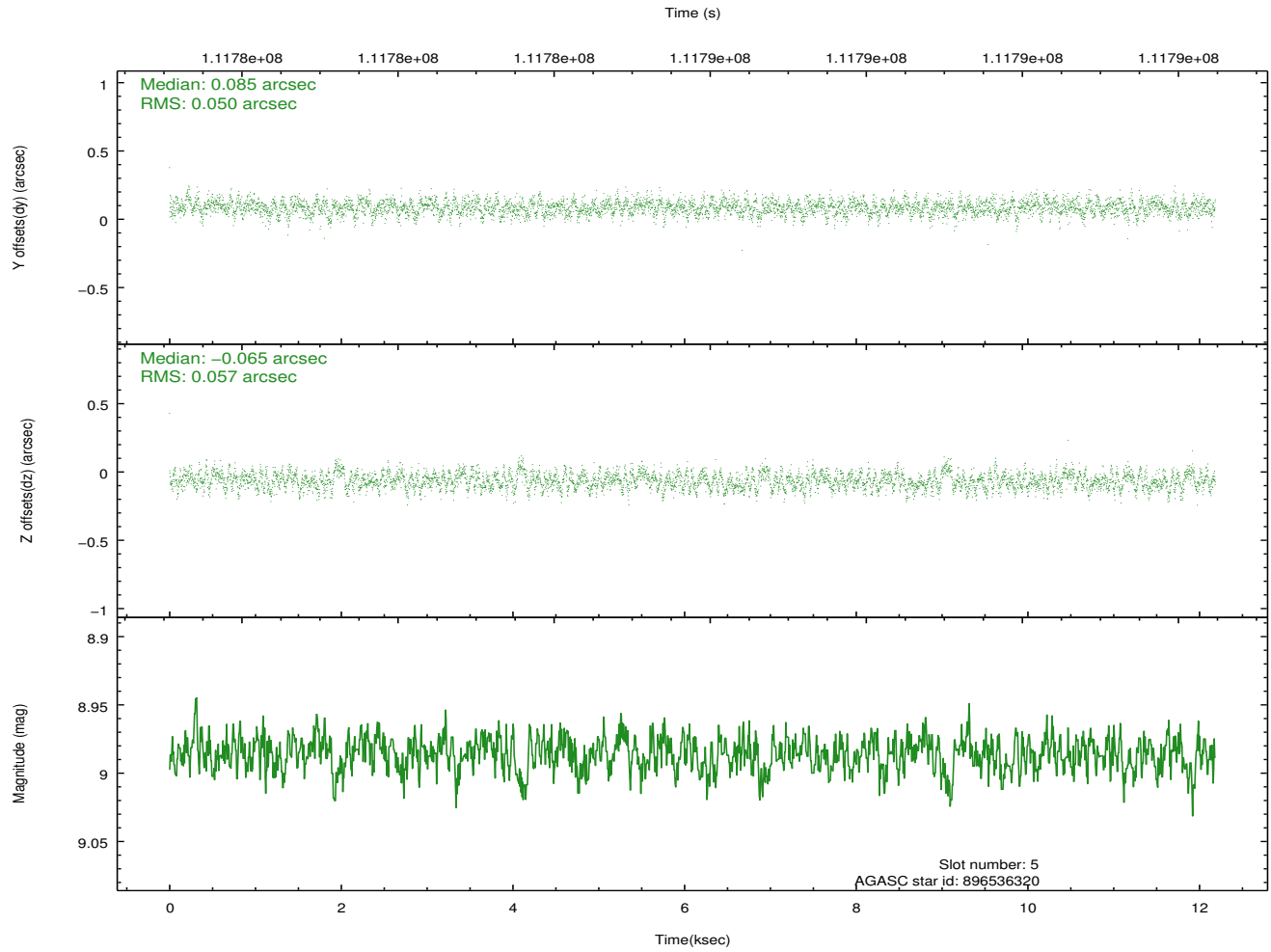
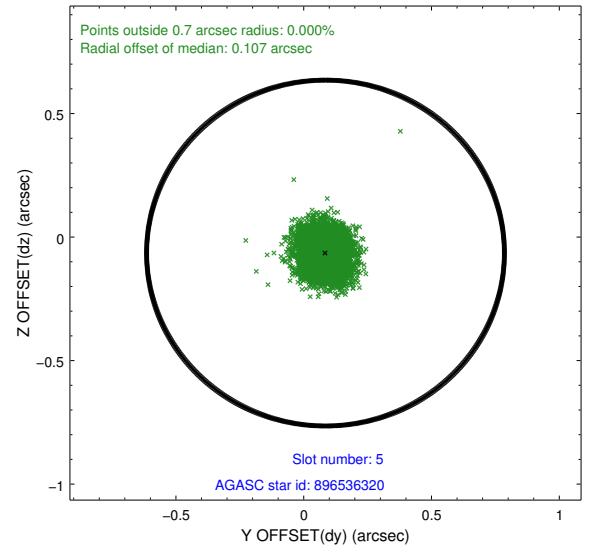
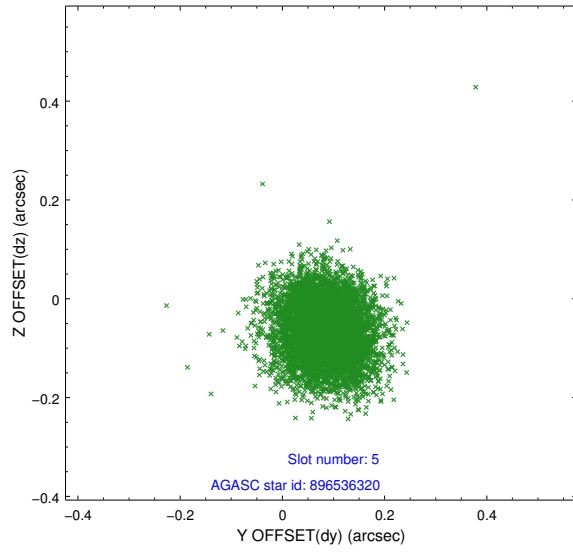
### 2.4.1 Slot 3



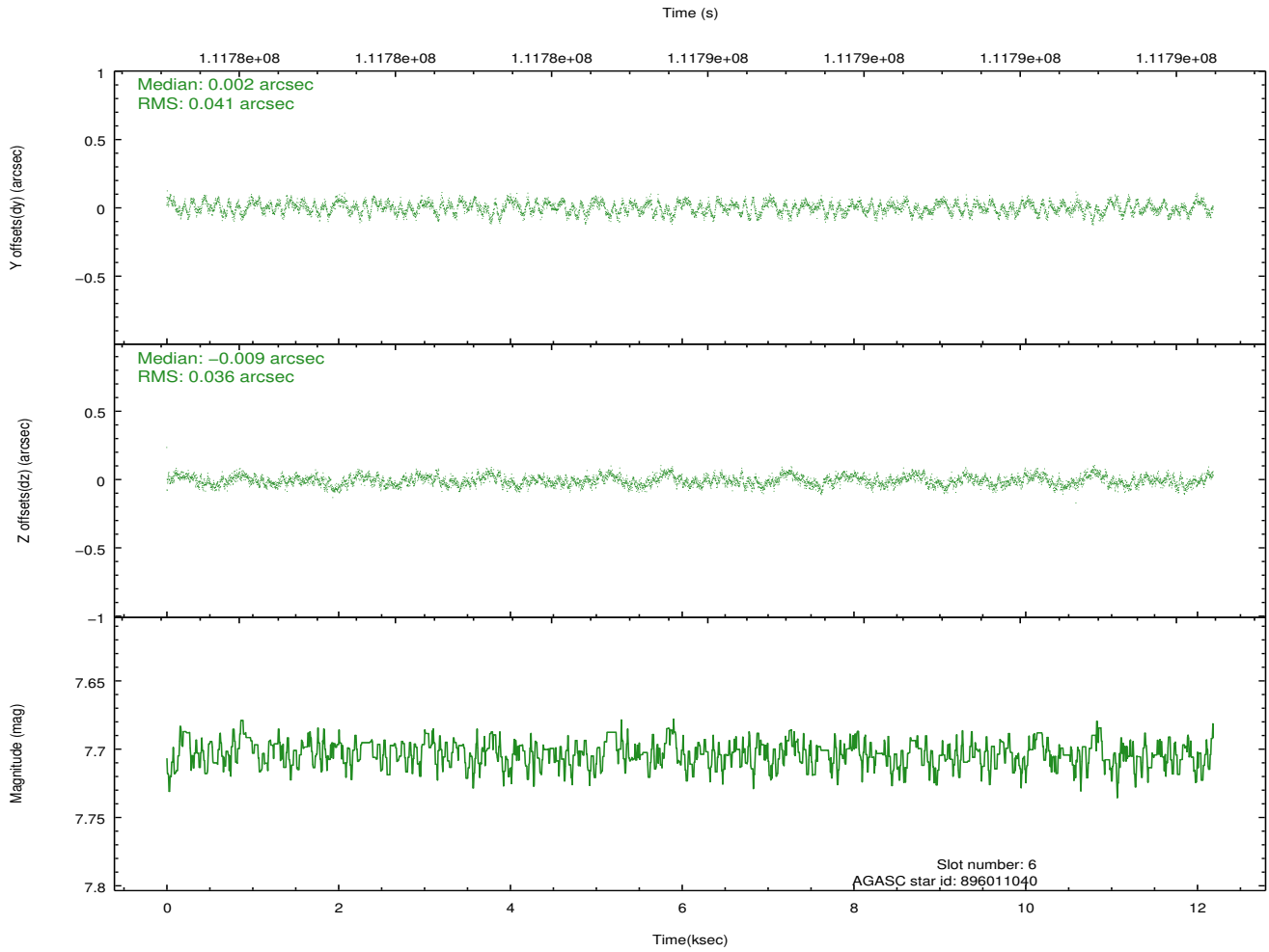
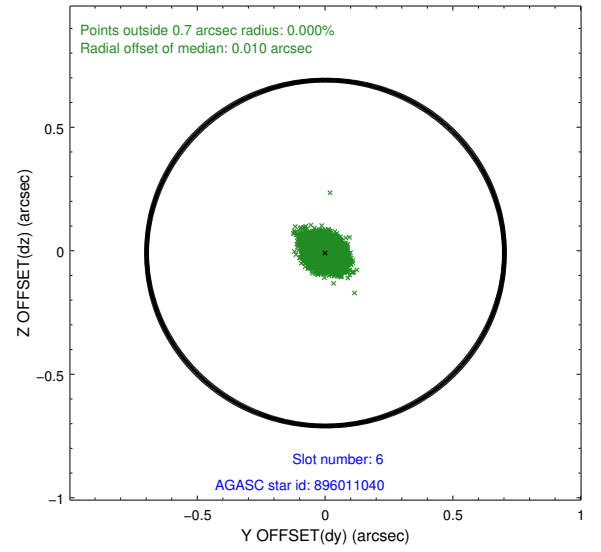
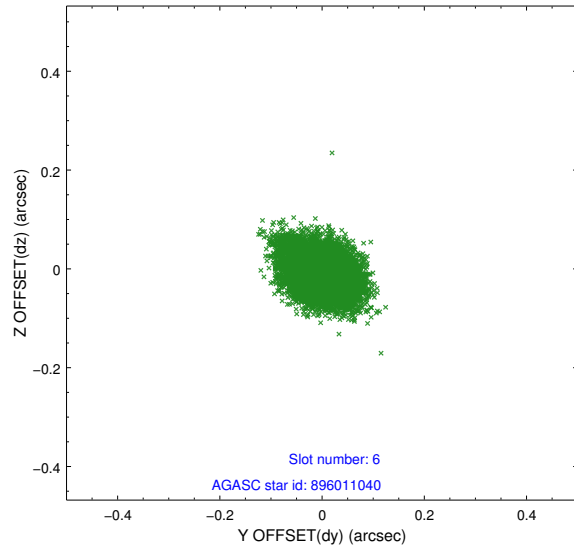
## 2.4.2 Slot 4



### 2.4.3 Slot 5

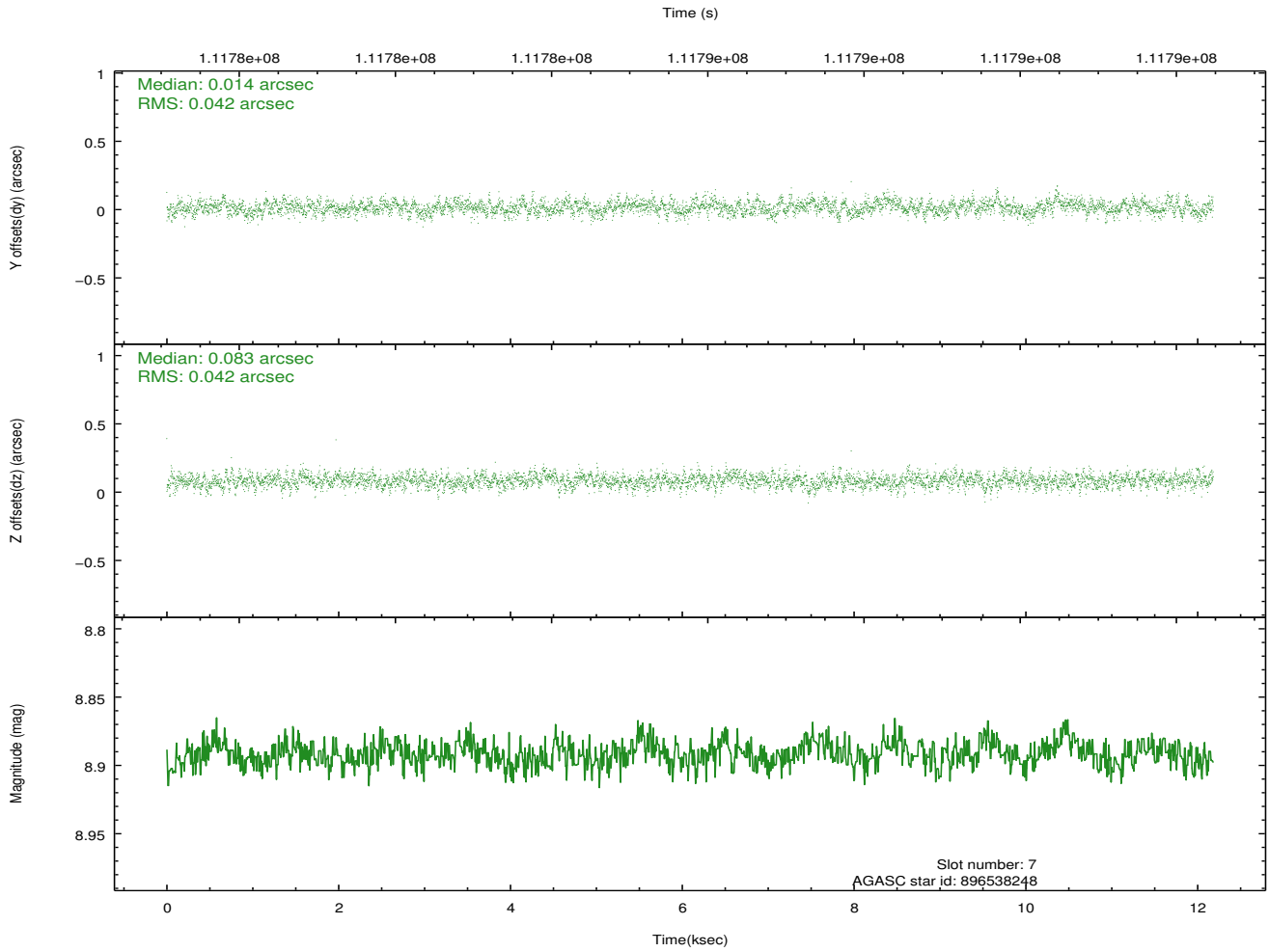
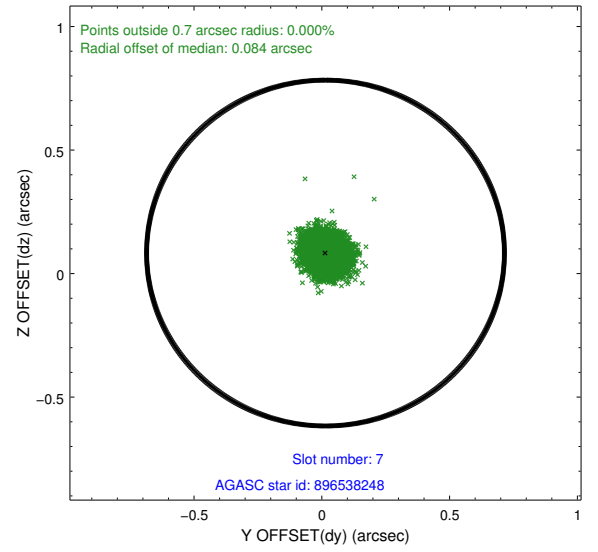
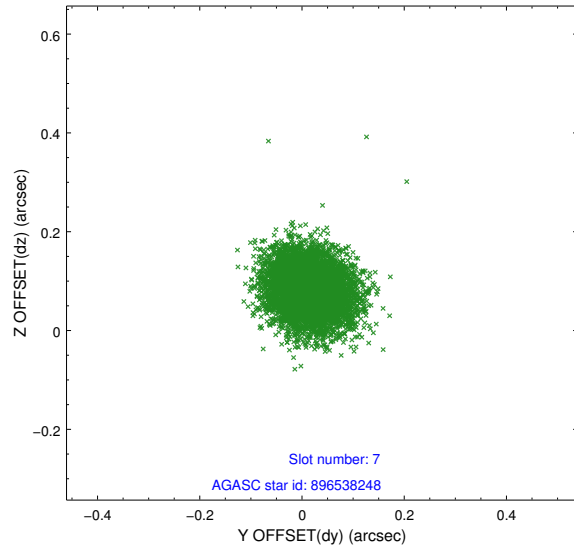


## 2.4.4 Slot 6



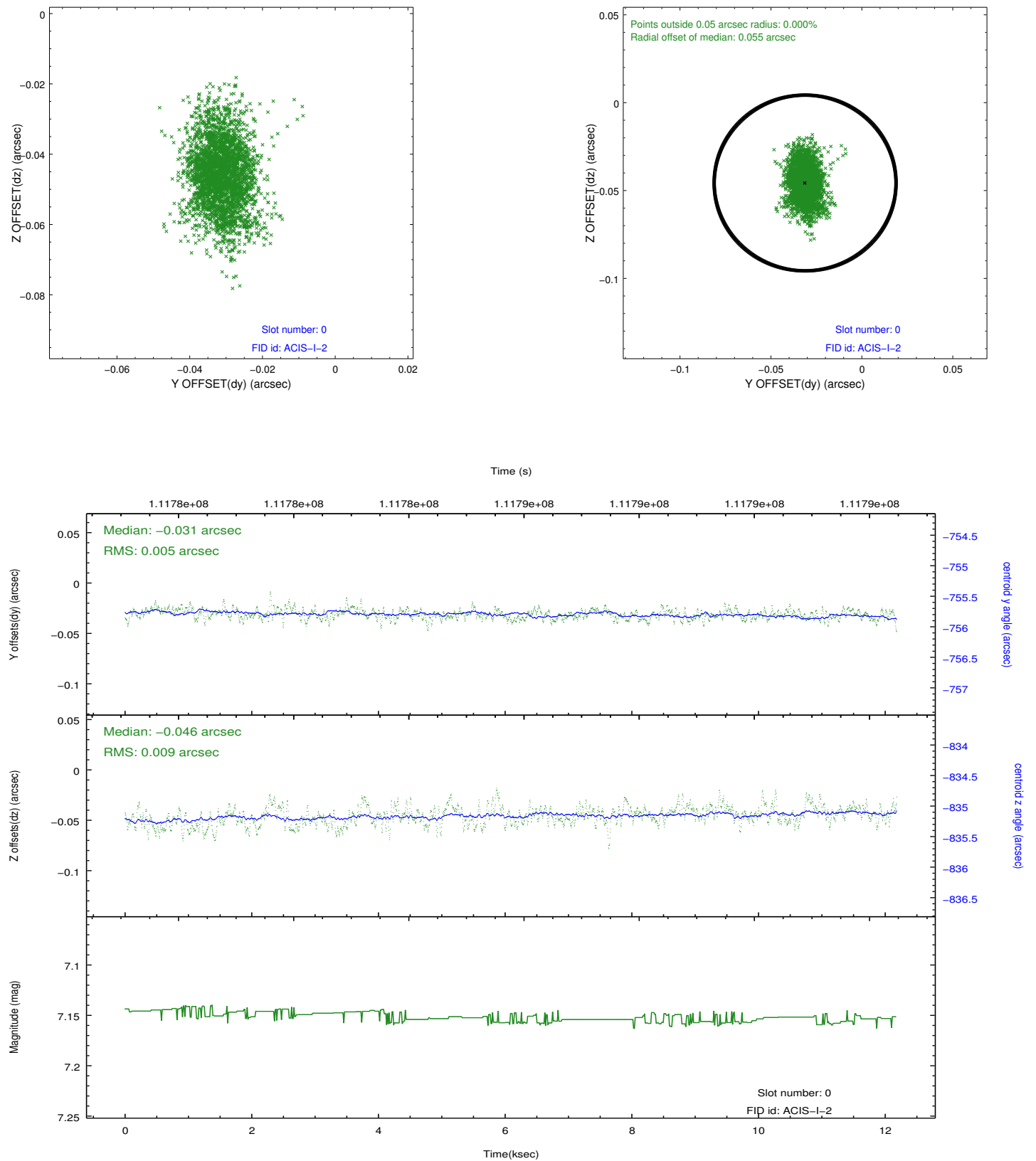


## 2.4.5 Slot 7

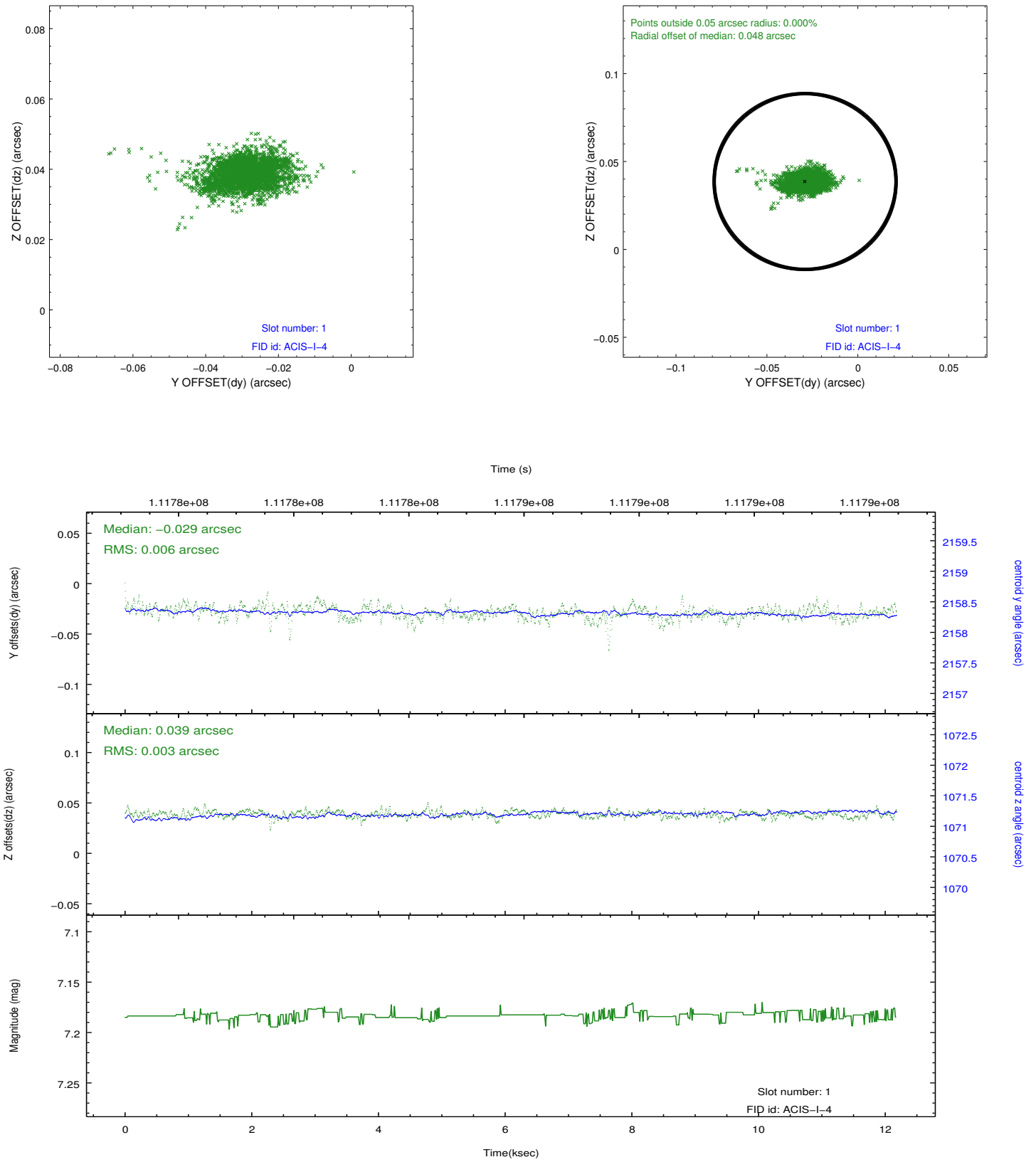


## 2.5 FID Slots

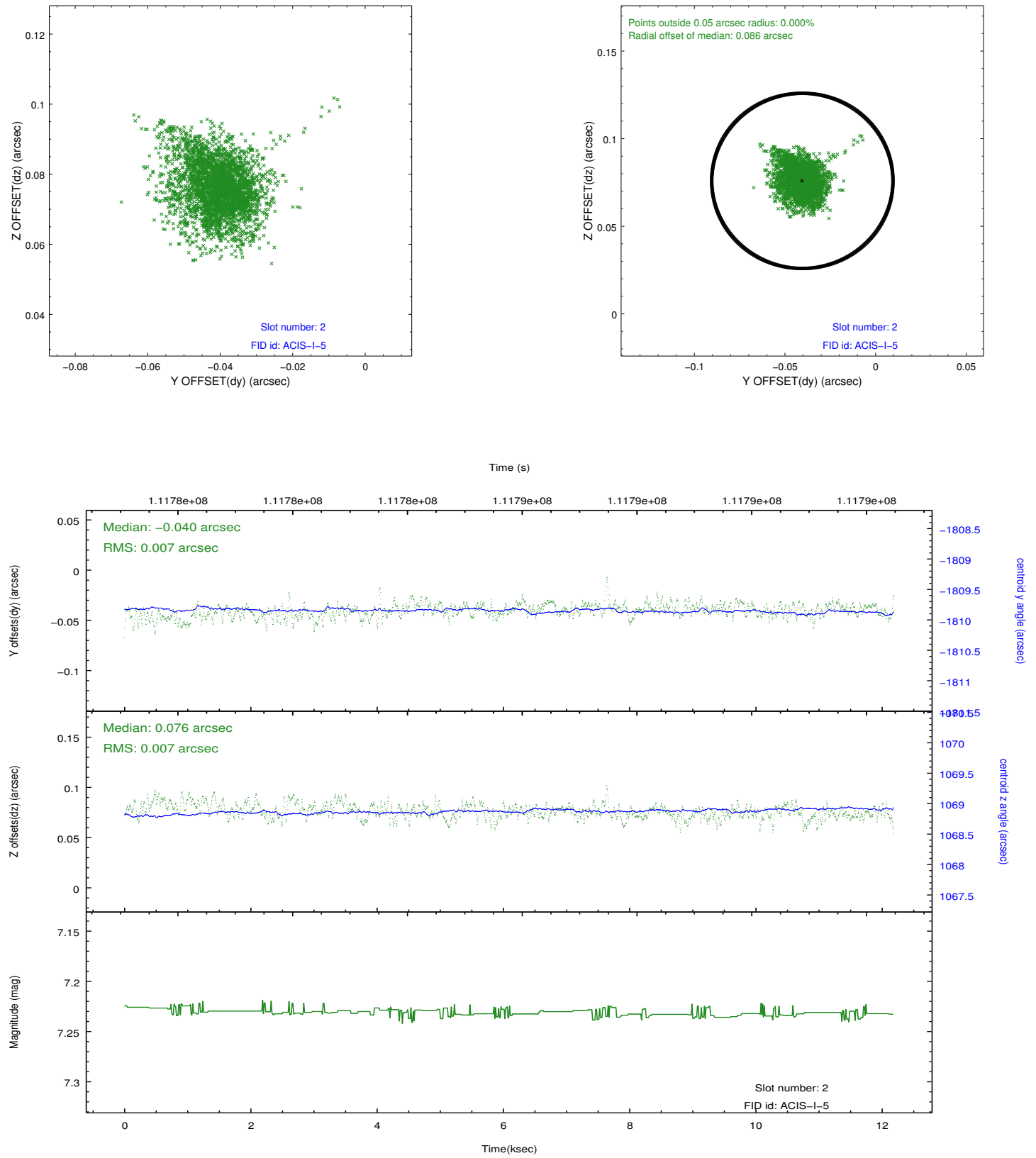
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.10.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	11.8

## A.2 Comments

Roll constraint met.

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A spatial region of the original bias map for CCD = 1 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small ( $\sim 20$  eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 1 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:  
(266.52528,-28.49174),(266.52107,-28.49266),(266.52546,-28.50842),(266.52967,-28.50750)